

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 10/615,293
Attorney Docket No.: Q76485

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A master information carrier comprising:
a pattern of a magnetic layer representing information to be transferred to a high-density recording slave medium where track width is not larger than 0.3 μ m, wherein the pattern comprises a plurality of tracks, and
wherein the pattern comprises a plurality of tracks, and wherein at least one of following conditions is met: when the width of each of said plurality of tracks is smaller than length of one scanning with an electron beam that forms the pattern, the width of each of said plurality of tracks is greater than drawing diameter of the electron beam that forms the pattern, and
when the width of each of said plurality of tracks is greater than the length of one scanning with the electron beam, the length of the one scanning is greater than the drawing diameter of the electron beam.

2. (previously presented): The master information carrier as defined in Claim 1, wherein at least one track from said plurality of tracks has the width equal to $[n-(n-1)k] \times d$, when n represents number of times by which said at least one track is scanned by the electron beam, d represents the drawing diameter of the electron beam and k represents a coefficient representing

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the degree of overlap between the scannings, and where the value of k is in a range of not smaller than 0 and not larger than 0.8.

3. (previously presented): The master information carrier as defined in Claim 2, wherein the value of k is in the range of not smaller than 0.2 and not larger than 0.8.

4. (currently amended): The master information carrier as defined in Claim 1, wherein at least one track from said plurality of tracks has a width greater than drawing diameter of an electron beam that scans the pattern onto the master information carrier and wherein the-a master image carrier is modulated according to information to be transferred while rotating a disc thereby forming a substrate of the-a master image carrier having an irregularity pattern by mastering on the basis of the pattern drawn by the electron beam, and forming a-the magnetic layer on the substrate.

5. (currently amended): A master information carrier comprising:
a substrate; and
a pattern of a magnetic layer representing information to be transferred to a high-density recording slave medium where track width is not larger than 0.3 μ m, the magnetic layer is formed on the substrate,

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wherein the pattern comprises a plurality of ~~rectangular~~ protruding portions, upper
surface of each of said protruding protrusions has a rectangular shape with substantially straight
end portions.

6. (previously presented): The master information carrier as defined in Claim 5, further comprising:

a protective film covering the magnetic layer;
a reinforcement layer positioned between the protective film and the magnetic layer; and
a lubricant layer positioned on top of the magnetic layer suppressing deterioration in durability of the magnetic layer.

7. (previously presented): The master information carrier as defined in Claim 6, wherein the protective film is 5 to 30 nm thick, the reinforcement layer is made of silicon, and the substrate comprises at least one of a metal, nickel, silicon, glass, quartz, aluminum, alloy ceramics, and synthetic resin.

8. (previously presented): The master information carrier as defined in Claim 7, wherein the height of each of said plurality of rectangular protruding portions is in a range of 80 nm to 800 nm.

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9. (previously presented): The master information carrier according to Claim 5, wherein the height of each of said plurality of rectangular protruding portions is in a range of 100 nm to 600 nm, wherein the magnetic layer comprises at least one of cobalt, cobalt alloy, iron, iron alloy, nickel and nickel alloy, and wherein thickness of the magnetic layer is approximately 50 nm to 500 nm.

10. (currently amended): The master information carrier according to Claim 5, wherein the magnetic layer comprises at least one of FeCo iron alloy and ~~s:~~ ~~FeCo and FeCoNi~~ iron alloy and thickness of the magnetic layer is approximately 50 nm to 500 nm.

11. (previously presented): The magnetic information carrier according to Claim 5, wherein the thickness of the magnetic layer is approximately 100 nm to 400 nm.

12. (previously presented): The magnetic information carrier according to Claim 5, wherein the substrate is a resin substrate comprising at least one of acrylic resins, polycarbonate, polymethyl methacrylate, vinyl chloride resins, polyvinyl chloride, vinyl chloride copolymer, epoxy resins, amorphous polyolefins, and polyesters, and wherein when the substrate is the resin substrate, height of said plurality of rectangular protruding portions is in a range of 50 nm to 1000 nm.

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13. (previously presented): The magnetic information carrier according to Claim 5, wherein the substrate comprises of resin and height of said plurality of rectangular protruding portions is in a range of 100 nm to 500 nm.

14. (previously presented): The magnetic information carrier according to claim 5, wherein the magnetic information carrier is disc-shaped.

15. - 20. (canceled).

21. (previously presented): The master information carrier according to claim 1, wherein the tracks comprise a substantially rectangular protrusions.

22. (previously presented): The master information carrier according to claim 21, wherein end portions of the rectangular protrusions are relatively straight.

23. (new): A master information carrier comprising:
an electron-beam scanned pattern of a magnetic layer representing information to be transferred to a high-density recording slave medium where track width of each of a plurality of tracks is not larger than 0.3 μm ,
wherein the electron-beam scanned pattern has a drawing diameter less than the width of each of said plurality of tracks.

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24. (new): The master information carrier according to claim 23, wherein the electron-beam scanned pattern is an electron-beam multiply scanned pattern.